

PATENT SPECIFICATION

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762,611



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COMPLETE SPECIFICATION

"Display device."

We, ROTORSPELLERS LIMITED, a British Company, of Portsmouth Road, Horndean, Hampshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to display devices, and particularly to such devices of the kind in which advertising or like matter is presented in a series of successive representations.

The invention has among its objects to provide a simple apparatus particularly for the display of cloths patterns and the like which require a relatively large area for a satisfactory representation; which will display a large number of patterns or the like on the one apparatus in which the pattern or the like can be readily and quickly changed as desired; in which the construction is light, compact and simple so as to be readily adapted to be moved from one place to another; which is inexpensive to run and which can be left to run for long periods without the necessity for attention or adjustment.

According to the invention a display device comprises a wheeled frame, a circumferential series of horizontal rods mounted in opposite end plates in the frame, resilient members in the form of plates for carrying descriptive or pictorial matter pivoted along one edge on said rods and motor means for rotating the cylindrical cage formed by said rods in said end plates, in such manner as to present front and/or rear surfaces of said supports to the viewer.

Thus the cylindrical member may be formed as two circular end plates connected together circumferentially each to each by spaced parallel rods, to which the supporting elements in the form of thin rectangular sheets or boards may be pivotally connected along one edge, so that the sheets or boards are carried round by the cylindrical member in its rotation.

With these objects and others in view, as will hereinafter appear, the invention comprises the display device hereinafter described and particularly defined in the claims.

The invention is diagrammatically illustrated by way of example in the accompanying drawings, in which:—

Fig. 1 is a front elevation of a display device according to the invention; and

Fig. 2 is a corresponding side elevation.

In carrying the invention into effect according to the construction illustrated in the accompanying drawings, the device comprises a plurality of support elements or display cards 1, of rectangular shape on each surface of which is represented a picture, pattern or the like to be displayed.

Each element or card is pivotally mounted along one edge on end hinges 2, and on a middle hinge 3, to a horizontal metal rod 4.

The rods are formed to pass respectively through a circumferential series of holes provided in one circular end plate 5. A plate 7 is provided and secured as by wing nuts 8 on the end plate 5 of the cylindrical cage and is so formed as to hold the rods 4 in position. At the opposite end the rods are formed at the ends to a reduced diameter to fit into a corresponding circumferential series of holes in the opposite end plate 6. Thus the patterns may quickly and easily be changed by removing the plate 7 and sliding the rods laterally out for replacement by other elements or cards. A shaft 9 extends laterally through the end plates 5 to be received in bearings 10 mounted at each side of triangular shaped tubular end members 11 forming part of the supporting frame of the device. The vertical end frame members 11 are secured together by transverse frame members 12 and the whole frame is mounted on rollers 13 so that the device may be readily moved from one place to another.

The cylindrical cage formed by the series of horizontal rods 4 mounted in the end plates 90

5 is rotated through chain gearing referred to generally by the reference 14, by means of an electric motor 15, for example, a fractional horsepower motor, which is conveniently supported and secured on a shelf or framework secured on one of the vertical frame members 11.

A resilient metal rod 16 may be provided to extend vertically upwards and then at right angles to rest with its horizontal length bearing against the upper part of the upper of the support elements or display cards 1, at a position near the top edge. The rod 16 serves to restrain the upper edge of the element or card in the rotation of the cylindrical cage, so that the card will flip or flick over and effect a substantially instantaneous change from the upper position in which one surface is presented to the viewer to the depending position in which the other surface is presented.

It will be understood that the motor 15 is caused to rotate at a slow speed, for example at 4 revs. which speed may be varied as desired, so that the elements or cards are held in the display position for the time required, and are then caused to flick over into a new position presenting the matter on the rear surface of the upper element or card and the matter on the front face of the next upper element or card in the series.

As the rotating movement of the cylindrical cage moves the end of the support element or card out of contact with the resilient restraining element 16, the element or card falls through an arc into a position where it is suspended vertically downward from a rod 4 on the hinges 2, 2, 3 and in so doing bringing the reverse side of the element or card into view. Thus, while the element or card is held in the supported position, one side is displayed and after it is swung downwardly into the depending position the reverse side is displayed, so that for a determined interval of time two representations on successive elements which may, if desired, form part of

the sequence, are displayed together.

While the use of the resilient stop member 16 is advantageous, it has been found that the device operates adequately without it, the elements or cards falling under their own weight after passing beyond a position of stable equilibrium.

It will be understood that many variations of structure, design and arrangement of the parts of the illustrated embodiment may be effected to adapt the invention to a variety of uses and applications. Such variations or adaptations as would occur to those skilled in the art upon a reading of the foregoing specification and appreciation of the invention, are included within the scope thereof.

What we claim is:—

1. Display device comprising a wheeled frame, a circumferential series of horizontal rods mounted in opposite end plates in the frame, resilient members in the form of plates for carrying descriptive or pictorial matter pivoted along one edge on said rods and motor means for rotating the cylindrical cage formed by said rods in said end plates, in such manner as to present front and/or rear surfaces of said members to the viewer.

2. Display device according to Claim 1, including means for preventing the fall under gravity of one of said resilient members for a determined period of rotation of the cage, whereby the movement from one position of the member displaying one surface to the viewer to the position displaying the other surface is effected by snap-action.

3. Display device according to Claim 1, including hinge means for mounting the resilient members on the rods, whereby the members may be readily mounted on and readily removable from said rods.

4. Display device substantially as hereinbefore described and illustrated in the accompanying drawings.

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PROVISIONAL SPECIFICATION

"Display device."

We, ROTORSELLERS LIMITED, a British Company, of Portsmouth Road, Horndean, Hampshire, do hereby declare this invention to be described in the following statement:—

The invention relates to display devices, and particularly to such devices of the kind in which advertising or like matter is presented in a series of successive representations.

According to the invention the display device comprises a rotatable cylindrical member or cage, supporting elements formed as

laminae or sheets on each surface of which matter for display may be mounted or otherwise suitably represented, the elements being pivotally mounted at one end peripherally with respect to the cylindrical member and moved with it, a stationary stop member so positioned relatively to the supporting elements as to engage in succession the free end of each element to retain it for a predetermined period in a substantially vertical position with the advertising matter visible on the front face,

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and on rotation of the cylindrical member at the end of the period to release the element to permit it to swing downwardly about the pivoted end to assume a position hanging 5 vertically downwards and to display the matter represented on the reverse side of the element for a corresponding period.

Thus the cylindrical member may be formed as two circular end plates connected together 10 circumferentially each to each by spaced parallel rods, to which the supporting elements in the form of thin rectangular sheets or boards may be pivotally connected along one edge, so that the sheets or boards are carried 15 round by the cylindrical member in its rotation.

In carrying the invention into effect according to one construction, the support elements may be made of Japanese three ply-wood 20 *poom* *Δ**id*-*æ**æ**u**p* *æ**æ**u**æ**d**æ**f* *j**o* *æ**p**æ**u* *æ**q* *Δ**æ**u* mounted on horizontal rods or strut members mounted circumferentially in spaced relation to connect the two circular end plates of the cylindrical member and serving as pivots for 25 the support elements.

The cylindrical member may advantageously be rotated slowly at a predetermined speed, for example at a speed of 4 r.p.m., by a fractional horse power motor or the like, so that, 30 as the member rotates, the support elements move in succession into a substantially vertical position above the cylinder, in which position the matter on one side is displayed.

To prevent the support elements falling

from the vertical as soon as this position is 35 reached, a stop member comprising two angled arms at right angles and formed of resilient material is mounted at the end of one arm on the end of the axis of the drum and held so that the free end of the support element which 40 at any time is in the top display position rests lightly on the other arm which is substantially horizontal.

As the rotating movement of the cylindrical member moves the end of the support element 45 out of contact it falls through an arc into a position where it hangs vertically downwards and in doing so brings the reverse side into view.

Thus, while the sheet or board is held in the 50 supporting position, one side is displayed and after it has swung downwardly the reverse side is displayed so that for a determined interval of time two representations on successive elements, which may advantageously form part 55 of a sequence, are displayed together.

The drum may advantageously be mounted upon a framework adapted to be moved on wheels or rollers from place to place, so that the display may be made where it can be seen 60 to most advantage, such as for example, the window of a showroom.

While the use of the stationary stop member is advantageous, it has been found that the device operates adequately without it. 65

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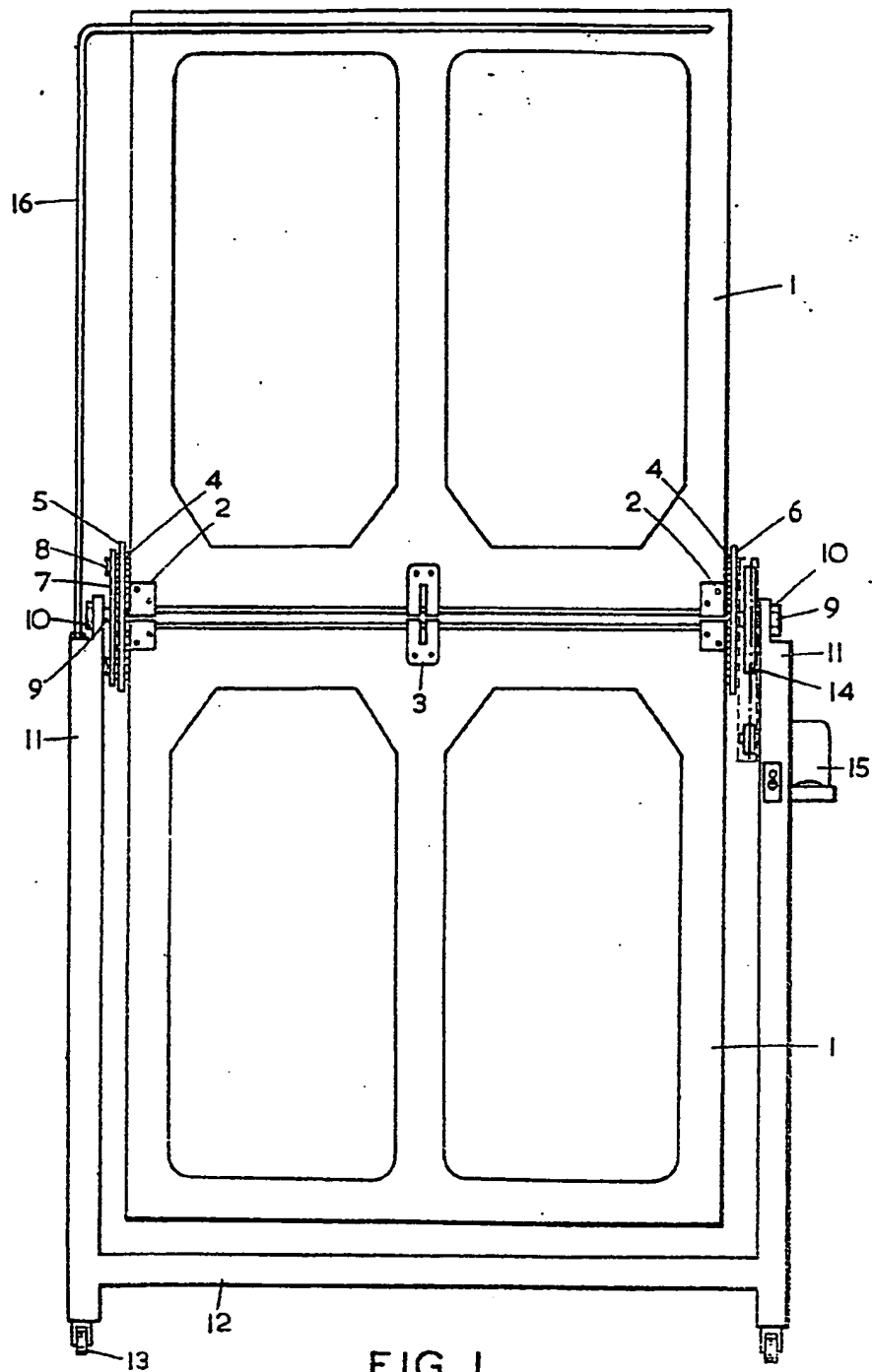


FIG. 1

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2 SHEETS

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the Original on a reduced scale.
SHEETS 1 & 2

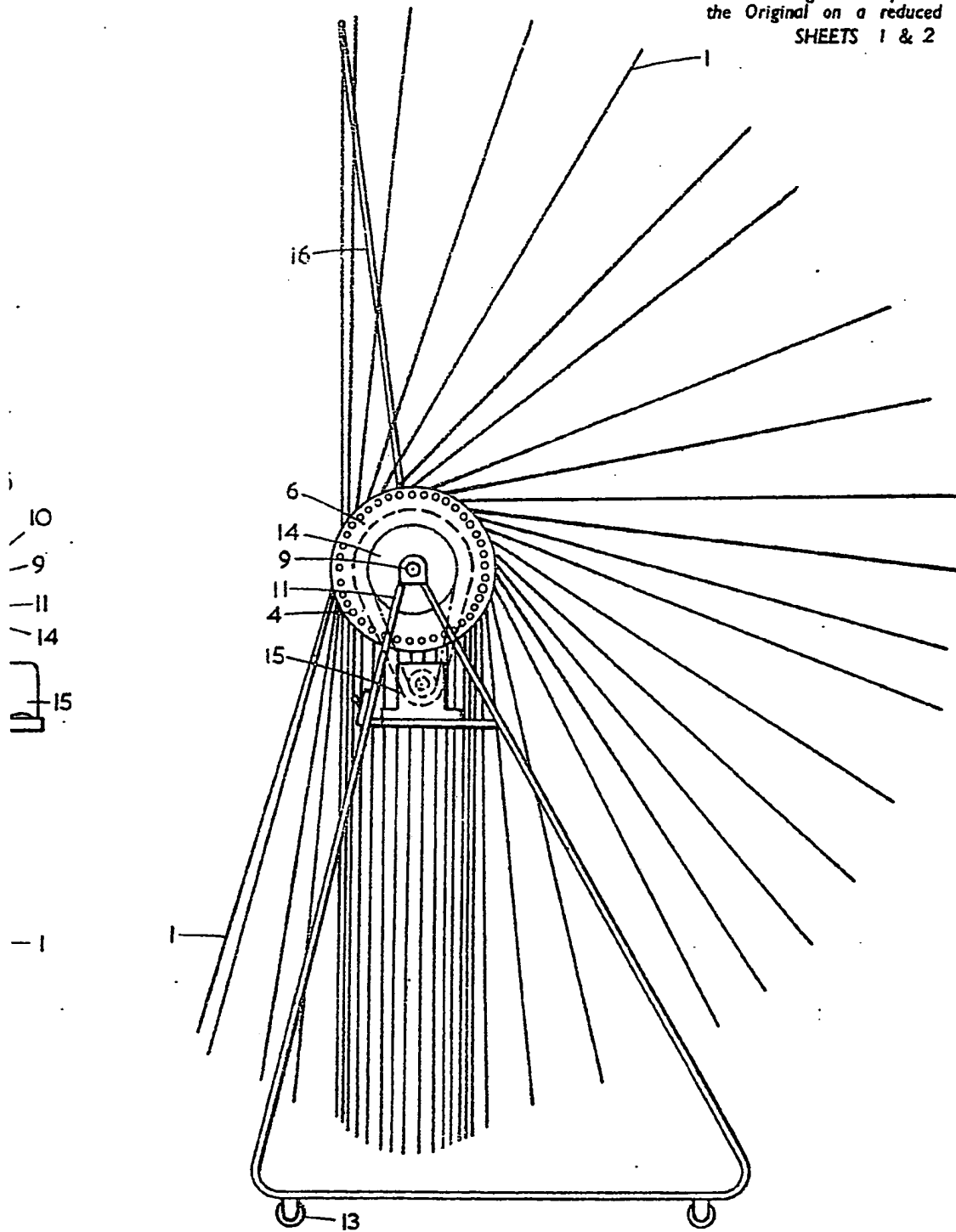
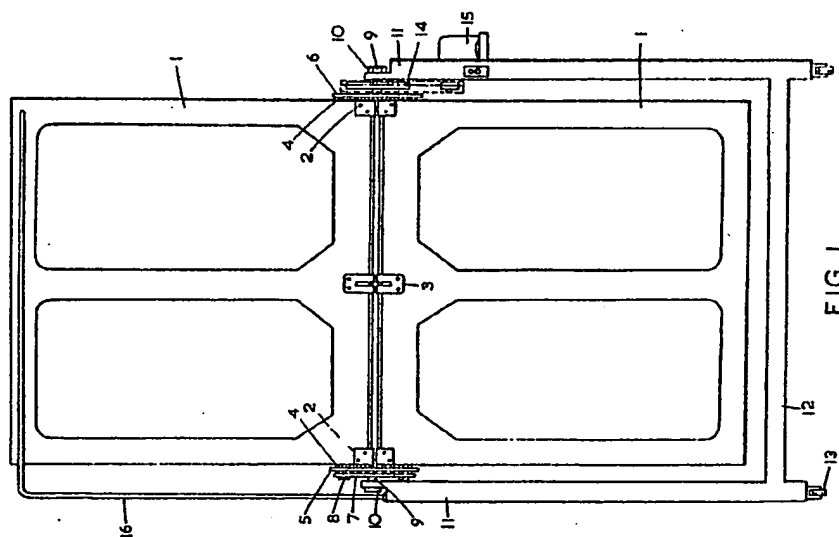
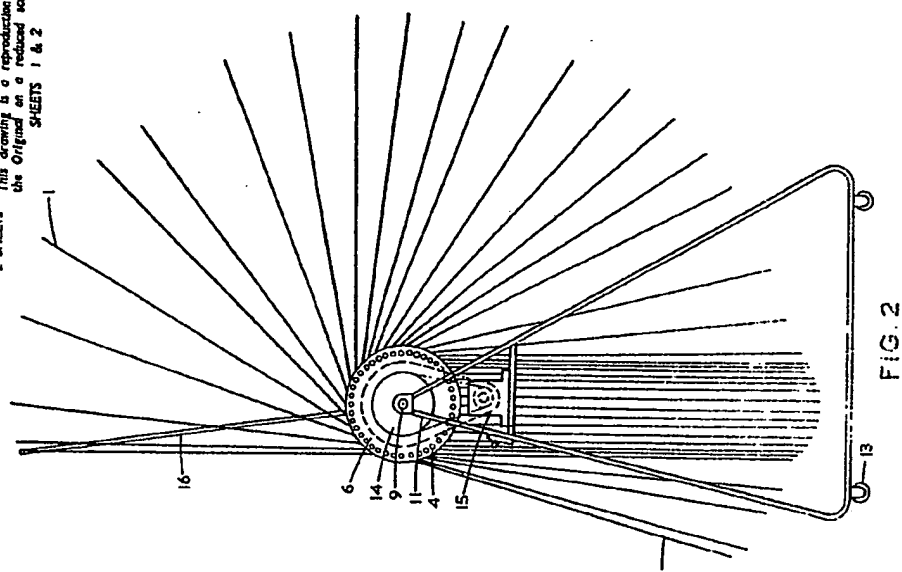


FIG. 2

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